REMARKS

The Office Action mailed July 12, 2006, has been received and its contents carefully noted. Claims 1-19 and 35 were pending. Claims 1-9 and 35 are active and rejected. Claims 10-19 are withdrawn. Claims 20-34 are canceled. By this Response, claims 1, 3, 5, 8, 9 and 35 have been amended. Support may be found in the specification and the claims as originally filed. Payment also has been made for introduction of multiple dependent claims. No statutory new matter has been added. Therefore, reconsideration and entry of the claims as amended are respectfully requested.

Claim Objections

The Examiner objected to claims 1 and 3 for indicating that "a lower side member connected to a shaft through the holding member" when the specification discloses "a lower side member connected to a shaft, which is put through the holding member".

Applicants respectfully submit that claims 1 and 3 have been amended to clarify that the lower side member connected to a shaft is put through the holding member. Therefore, Applicants respectfully urge that the objection to claims 1 and 3 should be withdrawn.

Rejection under 35 U.S.C. 112, second paragraph

The Examiner rejected claims 5, 8 and 9 under 35 U.S.C. 112, second paragraph, as being indefinite for lacking antecedent basis for "the lower side temperature adjusting mechanism" and "the upper side member".

Applicants respectfully submit that the claims, as amended, obviate this rejection. Therefore, the rejection under 35 U.S.C. 112, second paragraph, should properly be withdrawn.

Rejection under 35 U.S.C. 103(a)

The Examiner rejected claims 1-9 and 35 under 35 U.S.C. 103(a) as being unpatentable over Oka et al. (US 6,431,190) in view of Akimoto (US 5,868,865). Specifically, the Examiner

deemed that it would have been obvious to utilize the lift mechanism of Akimoto in order to raise the rear shielding plate of Oka. The Examiner also deemed that it would have been obvious to utilize a heat exchange passage in the apparatus of Oka in order to adjust and control the temperature of the processing liquid while treating the upper surface of the object in the apparatus of Oka.

Applicants respectfully submit that, as set forth in the amended claims, the lower side member of the present invention has a body structured by metal materials and also a layer of a hydrophobic resin on the surface of the body. See e.g. Specification page 39, lines 17-22. Due to the hydrophobic resin layer, a stable layer of processing liquid can be formed in the gap between the upper surface of the lower side member and the undersurface of the substrate. See, for example, Fig. 36A where such stable layer of cleaning liquid 268 is present regardless of whether the gap is 0.5mm or 1.0mm.

Applicants explain that, generally, a lower side member made of metal materials such as aluminum, stainless steel, or the like, has a small contact angle. Consequently, it is necessary to shorten the gap between the upper surface of the lower side member and the undersurface of the substrate in order to form a stable layer of the processing liquid therein. However, the substrate then tends to be contaminated by particles remaining on the surface of the lower side member if this gap between the lower side member and the substrate is too small. Furthermore, it is difficult to cover the entire substrate, as shown in Figures 38A and 38B, if the gap is small. Additionally, if the surface of the lower side member is not hydrophobic with respect to the processing liquid, particles tend to remain on the surface of the lower side member, and contaminate the substrate. See Specification pages 39-40.

To address these problems, the lower side member of the present invention has a metal body and a hydrophobic resin layer on its surface. Thereby, few, if any, particles remain on the surface of the lower side member. And, even if some particles remain on the surface of the lower side member, they will be evenly dispersed.

In contrast to the present invention, the applied art, alone or in combination, fails to teach or suggest a lower side member having a body (1) structured by metal materials and (2) a hydrophobic resin layer on its surface. Likewise, neither Oka et al. nor Akimoto et al. teaches or suggests the advantages of a lower side member having a body structured by metal materials and a hydrophobic resin layer on its surface. Consequently, one skilled in the art would not have been motivated to provide a lower side member having a body structured from metal materials and a hydrophobic resin layer on its surface in order to prevent the substrate from being contaminated by particles remaining on the surface of the lower side member.

For the foregoing reasons, the amended claims are unobvious and the rejection under 35 U.S.C. 103(a) should properly be withdrawn.

Request for Interview

Applicants respectfully request either a telephonic or an in-person interview should there be any remaining issues.

CONCLUSION

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, in the event that additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefor are hereby authorized to be charged to **Deposit Account No. 02-4300,** Attorney Docket No. **033082M115**.

Respectfully submitted,
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Date: January 12, 2007

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